

REMARKS

In the Office Action dated June 24, 2005, claims 1-5 were rejected by the Examiner under 35 USC § 112, second paragraph, as being indefinite. Claims 2 and 5 were rejected under 35 USC § 102(b) as anticipated by Hulyalkar et al. (US 5 787 080). Claims 1, 4 and 6-23 were rejected as being unpatentable over Immonen et al. (US 6 738 361) in view of Hulyalkar et al. (US 5 787 080) and in further view of Kondylis et al. (US 6 721 290) (hereinafter "Hulyalkar", "Immonen", and "Kondylis", respectively).

Applicant has cancelled claims 1-23, without prejudice, to obviate the rejections.

Applicant has added new claims 24-41 to more clearly define what Applicant regards as the invention.

New claims 24-41 are allowable over the prior art of record based on at least the following considerations.

1. THE ART OF RECORD DOES NOT TEACH OR SUGGEST WIRELESS  
COMMUNICATION WHEREIN A DATA ELEMENT IS SCHEDULED FOR  
TRANSMISSION BY A MAC LAYER ELEMENT PURSUANT TO A TRANSMISSION  
PRIORITY INCLUDED IN A REQUEST TO TRANSMIT THE DATA ELEMENT

Claims 24-38 and 40 recite, *inter alia*, wireless communication wherein a data element is scheduled for transmission by a MAC layer element pursuant to a transmission priority included in a request to transmit the data element.

Hulyalkar, Immonen, and Kondylis, alone or in combination, do not teach or suggest what is recited.

Hulyalkar

Hulyalkar describes an ATM wireless LAN in which "long-term" services having specific QoS requirements are established. At the outset, a connection/setup phase is invoked to establish ATM connections for providing services at desired QoS levels. This connection/setup phase occurs before the phase in which data are transmitted. Requests including QoS information transmitted in the connection/setup phase therefore are not designed to reserve space for specific data elements, but rather "the reserved space is present for the entire duration of a respective service for each user." (col. 3, lines 49-50). Moreover, there is no indication that the QoS information transmitted in these connection/setup phase requests includes priority information.

Hulyalkar further describes a "short-term" strategy wherein time slots are allocated among the "long-term" services to enable transmission of specific data elements based on the instantaneous requirements of the services. However, there is no indication that any requests including QoS information, much less priority information, are transmitted attendant to this "short-term" strategy. Indeed, Hulyalkar instruction to transmit requests including QoS information as part of the "long-term" (connection/setup) strategy teaches away from transmitting such requests as part of the "short-term" (slot allocation) strategy, since transmitting such requests in both phases would be grossly inefficient and even redundant.

At page 9 of the Office Action, the Examiner, citing to column 8, lines 43-67, states that "Hulyalkar et al., in the field of communication, discloses encoding priority information about an impending [data] transmission in a resource request ...."

However, Hulyalkar makes no such disclosure. At column 8, lines 43-67, Hulyalkar instructs to allocate time slots in a control channel on a priority basis. This discussion

fails to teach encoding priority information about an impending data transmission in a resource request for at least two reasons.

First, the cited discussion in Hulyalkar describes priority-based allocation in the *control channel*. The control channel is the channel over which control information is transmitted. The cited discussion does not address priority-based allocation in the *data channel* over which data elements are transmitted. Accordingly, the cited discussion conveys nothing about priority handling of impending data transmissions.

Second, there is no mention in the cited discussion of *encoding priority information in a resource request*. At most what is discussed is using priority information to make time slot allocations without reference to how the priority information was learned. As mentioned, Hulyalkar teaches away from transmitting requests including QoS information for specific data elements by invoking the separate and prior connection/setup phase during which service level QoS information is transmitted for long-term application to a plurality of data elements. Therefore, while there is no explicit teaching in Hulyalkar of encoding priority information in a reservation request at any phase, if there were any suggestion along these lines it would be to encode priority information in requests transmitted in the connection/setup phase (which pertain to "long-term" services applicable to numerous data elements rather than specific data elements). There is no suggestion to encode priority information in a resource request for an impending data transmission.

In summary, Hulyalkar fails to disclose, teach or suggest wireless communication wherein a data element is scheduled for transmission by a MAC layer element pursuant to a transmission priority included in a request to transmit the data element, as recited in claims 24-38 and 40.

Immonen

Immonen addresses IP-based traffic prioritization in an IP network wherein a wireless terminal initiates session level QoS reservations on a wireless access point.

Reservations are made at the session level and thus, as with Hulyalkar, reservation requests discussed therein do not address specific data elements. Additionally, network layer elements, that is, IP-based elements, are invoked to resolve reservations.

Moreover, at page 6 of the Office Action, the Examiner admits that "Immonen et al. does not specifically disclose encoding ... priority information in a resource request."

Accordingly, Immonen fails to disclose, teach or suggest wireless communication wherein a data element is scheduled for transmission by a MAC layer element pursuant to a transmission priority included in a request to transmit the data element, as recited in claims 24-38 and 40.

Kondylis

Kondylis addresses a multicast scheduler wherein reservations are made at the MAC layer. It does not, however, disclose, teach or suggest wireless communication wherein a data element is scheduled for transmission by a MAC layer element pursuant to a transmission priority included in a request to transmit the data element, as recited in claims 24-38 and 40.

2. THE ART OF RECORD DOES NOT TEACH OR SUGGEST WIRELESS  
COMMUNICATION WHEREIN A DATA ELEMENT IS SCHEDULED FOR  
TRANSMISSION PURSUANT TO A TRANSMISSION PRIORITY ENCODED IN AN IEEE  
802.1Q TAG WITHIN A REQUEST TO TRANSMIT THE DATA ELEMENT

Claims 25, 31, 35 and 39-41 recite, *inter alia*, wireless communication wherein a data element is scheduled for transmission pursuant to a transmission priority stored in an IEEE 802.1Q tag within a request to transmit the data.

Hulyalkar, Immonen, and Kondylis, alone or in combination, do not teach or suggest what is recited. It has already been explained that there is no disclosure in any of these references to scheduling a data element pursuant to a transmission priority included in a request to transmit the data. The recitation in claims 25, 31, 35 and 39-41 that the transmission priority is encoded in an IEEE 802.1Q tag even more clearly distinguishes these claims from the art of record.

IEEE 802.1Q tags are conventionally applied to data frames by a switch or bridge to indicate the VLAN and/or priority of the data frame in which the tag is encoded. Prior to Applicant's teaching, it would not have been suggested to the artisan of ordinary skill to apply an IEEE 802.1Q tag to a reservation request made by an IEEE 802.11 peripheral station respecting a data element that would be later transmitted.

The art of record does not teach or suggest use of 802.1Q tagging in any context, much less in making reservation requests. Hulyalkar indicates to use time slots in an ATM-based control data superframe (CDS) to transmit control information. Immonen suggests IP-based configuration flows. And Kondylis is devoid of specifics on the question of how its reservation requests are made.

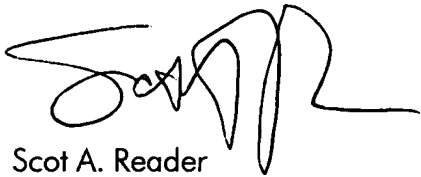
The recitation of wireless communication wherein a data element is scheduled for transmission pursuant to a transmission priority stored in an IEEE 802.1Q tag within a request to transmit the data provides an independent basis for allowability of claims 25, 31, 35 and 39-41.

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In view of the foregoing, consideration and favorable action on all claims are respectfully requested. Accordingly, Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Should any question remain in view of this communication, the Examiner is encouraged to call the undersigned so that a prompt disposition of this application can be achieved.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Scot A. Reader', with a stylized, flowing script.

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